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EXAMINER	
THOMAS, MIA M	

ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/817,145	SCHATZ ET AL.	
	Examiner	Art Unit	
	Mia M. Thomas	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 July 2008* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is responsive to applicant's remarks received on 17 July 2008. Claims 1-17 are pending in the present application. Claims 1-4, 6, 8, 9, 12-14 have been amended, and Claim 17 has been added herein. No new matter has been added.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. At line 5 of claim 17, the Examiner is unable to identify the "projected light exposure through the mask using a detector system." It is not clearly supported in the claims, specification, nor in the drawings in this instant application. At figure 1, there is a drawing with "descriptors" that does not identify that the system is projecting light on the mask through the detector. There is no physical disclosure of how the measuring result of the projected light would be exposed "through the mask". Where is the CCD or detector sensor in relationship to the mask? Is it above, below, to the side? There is no support for these claimed elements.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner is unclear as to how the "first error" is determined. If the projected light erroneous, or is the lens aberrated? Since the drawings and specification do not clearly disclose if the projected light produces an error or if the projection from the light source produces the error, it is unclear how the Examiner should interpret this claim.

Drawings

6. Figure 1 is objected to as depicting a block diagram without "readily identifiable" descriptors of each block, as required by 37 CFR 1.84(n). Rule 84(n) requires "labeled representations" of graphical symbols, such as blocks; and any that are "not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable." In the case of figure 1, the blocks are not readily identifiable per se and therefore require the insertion of text that identifies the function of that block. That is, each vacant block should be provided with a corresponding label identifying its function or purpose.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7, 9, 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman (US 2003/0048939 A1) in combination with Chhibber et al. (US 20040207836 A1).

Regarding Claim 1: (Currently Amended) Lehman teaches a method for determining imaging errors of an optical system in [[the]] a production of a mask for semiconductor component fabrication ("...a method of reticle inspection which is convenient and easy to use, and which further can be distributed or disseminated easily, so as to be shared by various participants in the process of manufacture of semiconductor devices, and wherein the results of the inspections can be correlated." at paragraph [0019, and paragraph [0024]) the method comprising:

measuring optical properties of a structure of the mask using a measuring system ("...and in particular in the RT-8200 (TM), is used to measure any line width error on a sub-pixel resolution

(the current LWED is capable of detecting line errors at up to [fraction (1/32)] of the pixel size)." at paragraph [0030]));

the measuring system comprising illumination and detector systems (While not forming part of the invention, this step is preferably achieved by scanning the reticle in a high resolution inspection system, such as the RT 8200 noted above." at paragraph [0030], Refer to Figure 1,numeral (2))

automatically selecting a stored correction data record from a correction database in a manner dependent on at least one parameter that characterizes the mask (Refer to Figure 2, numeral 240 and 250, alternatively, refer to Figure 1, numerals (3) and (4)),

the correction data record including information related to errors in the measuring system arising from the illumination and the detector systems ("Memory 250 then provides the second binarized stream to compare unit 245. The second binarized stream of data comes from a master image, representing an article 200 that is believed to be substantially free of defects, and previously stored in storage device 280. The computer portion of subsystem 240 then provides an output, indicating any mismatches between the first and second binarized streams of data, to output device 290.") Wherein, the illumination and detector system is Figure 2, numeral 220.

combining measurement results associated with the measured optical properties with the correction data record to produce a corrected measurement result (Refer to paragraph [0036], specifically, "Accordingly, it also is within the contemplation of the invention to store images other than the image of a master reticle, in a form in which the stored image may be used for subsequent comparison or analysis." Additionally, refer to Figure 1, numeral 7; "Accordingly, the pixels of the inspected and master images need to be aligned. Such an alignment can be done

using the conventional technique used in the Aris-I (TM) for aligning pixels of the inspected image with pixels of the database. It should be appreciated that in addition to storing the reference image, the DVD or other storage medium can also include information (such as the location of alignment targets, bar codes and so on) that make alignment and other pre-inspection calibration easier than in the Die to Die method, which does not have such information available. That information also could be stored elsewhere in the system.")

Alternatively, Chhibber teaches the correction data record including information related to errors in the measuring system arising from the illumination and the detector systems (Refer to Figure 7, numeral 101; "In step 101, image corrections are applied. These corrections include but are not limited to detector fixed pattern noise correction, illumination light level normalization, detector dark level corrections and flat field correction.");

and storing a measurement data record with the corrected measurement result in a database system ("The control computer 29 may further comprise a database (not shown) for storing the measurement and inspection results as well as other information such as images of the substrate scatter. The control computer 29 also controls the other operations of the other elements of the optical inspection system in accordance with the invention." at paragraph [0110]).

Lehman and Chhibber are combinable because they are in the same field of mask inspection specifically of inspection of flaws or impurities on a topographical surface.

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Lehman and Chhibber. All of the claimed elements were known in the prior art at the time of the invention and the skilled artisan could have combined the elements by known methods with no change in their respective functions, and the combination of the teachings of Lehman and Chhibber would have yielded predictable results to the skilled artisan.

The skilled artisan could have utilized storing a measurement data record with the corrected measurement result in a database system.

The motivation/suggestion for doing so would have been to "cause the control computer to control the elements of the optical inspection system connected to the control computer." at paragraph [0110], for example.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chhibber and Lehman to obtain the specified claimed elements of Claim 1.

Regarding Claim 2: (Currently Amended) Lehman teaches at least one parameter that characterizes the mask is [[the]] a wavelength at which the mask is used in a photolithography method ("Indeed, the inventive method and apparatus are equally applicable to inspection of masks, photo masks, reticles, or any other such product used in similar fashion in the manufacture of semiconductor devices, as for example by a photolithographic process." at paragraph [0076]. "In such an inspection, interferometers could be used, especially where resolution on a wavelength scale is needed." at paragraph [0068]).

Regarding Claim 3: (Currently Amended) Lehman teaches at least one parameter that characterizes the mask is a substance property of the mask ("Referring to Figure 1, the inventive method is implemented as follows. First, a reticle which is know to be good (i.e. is believed to be substantially free of defects, or as free of defects as is reasonably possible) is identified (step 1)." at paragraph [0030]).

Regarding Claim 4:(Currently Amended) Chhibber teaches the correction data record includes information for [[the]] correction of inhomogeneities of a radiation source of the illumination system of the measuring system (Refer to paragraph [0105], specifically, "The source light intensity sensors provide feedback to the system regarding light intensity of the broadband light source through control lines 31a and 31b.).

For clarity, the Examiner is stating that the feedback from the intensity sensors, corrects the inhomogeneities of the radiation source of the illumination system. It corrects or adjusts the appropriate values necessary from the database to determine what is "correct data".

Regarding Claim 5: (Previously Presented) Chhibber teaches the optical element comprises a lens ("The invention may also be implemented without the band pass filters. The output of the band pass filters passes to focusing lens assembly (such as a frontside focusing lens assembly 21A and a backside focusing lens assembly 21B as shown in FIG. 5)." at paragraph [0106]).

Regarding Claim 6: (Currently Amended) Chhibber teaches the at least one parameter that characterizes the mask comprises an identification mechanism (Refer to paragraph [0109]; "The

resulting frontside detector image can be processed using known optical character recognition (OCR) or Barcode detection software algorithms. Once the substrate identification has been determined, the substrate can be rotated to the measurement orientation." at paragraph [0109]).

Regarding Claim 7: (Previously Presented) Chhibber teaches the identification mechanism comprises a bar code ("The resulting frontside detector image can be processed using known optical character recognition (OCR) or Barcode detection software algorithms." at paragraph [0109]).

Regarding Claim 9: With regards to "Currently Amended", claim 9, claim 9 equally resembles the claimed elements of Claim 1. Claim 9 as presented disclose a device (apparatus). Lehman teaches "The present invention relates to inspection of articles, and in particular, to inspection of articles related to manufacture of semiconductor devices. More specifically, the invention relates to the inspection of articles used in photolithography during manufacture of semiconductor devices." at paragraph [0002]. Claim 9 claims the operational device steps that execute the method of Claim 1. Claim 9 is rejected for the same reasons, motivation and rationale as listed above at claim 1.

Regarding Claim 12: (Currently Amended) Lehman teaches a method for determining imaging errors of an optical system in [[the]] a production of a mask for semiconductor component fabrication ("...a method of reticle inspection which is convenient and easy to use, and which further can be distributed or disseminated easily, so as to be shared by various participants in the process of manufacture of semiconductor devices, and wherein the results of the

inspections can be correlated." at paragraph [0019, and paragraph [0024]) the method comprising:

measuring optical properties of a structure of the mask using a measuring system ("...and in particular in the RT-8200 (TM), is used to measure any line width error on a sub-pixel resolution (the current LWED is capable of detecting line errors at up to [fraction (1/32)] of the pixel size)." at paragraph [0030]));

automatically selecting a stored correction data record from a correction database in a manner dependent on the at least one parameter that characterizes the mask (Refer to Figure 2, numeral 240 and 250, alternatively, refer to Figure 1, numerals (3) and (4)),

combining measurement results associated with the measured optical properties with the correction data record associated with the mask in a data processing device to produce a corrected measurement result (Refer to paragraph [0036], specifically, "Accordingly, it also is within the contemplation of the invention to store images other than the image of a master reticle, in a form in which the stored image may be used for subsequent comparison or analysis." Additionally, refer to Figure 1, numeral 7; "Accordingly, the pixels of the inspected and master images need to be aligned. Such an alignment can be done using the conventional technique used in the Aris-I (TM) for aligning pixels of the inspected image with pixels of the database. It should be appreciated that in addition to storing the reference image, the DVD or other storage medium can also include information (such as the location of alignment targets, bar codes and so on) that make alignment and other pre-inspection calibration easier than in the

Die to Die method, which does not have such information available. That information also could be stored elsewhere in the system.") and

Chhibber teaches detecting at least one parameter for the characterization of the mask ("The system provides capability of optical inspection of patterned and unpatterned substrates in which a very large dynamic range with very high precision is desirable to provide detection of light scattering defects from sub micron to hundreds of microns in size." at abstract);

and the correction data record includes information for [[the]] correction of inhomogeneities of an illumination system (Refer to Figure 7, numeral 101; "In step 101, image corrections are applied. These corrections include but are not limited to detector fixed pattern noise correction, illumination light level normalization, detector dark level corrections and flat field correction.")

and storing a measurement data record with the corrected measurement result in a database system ("The control computer 29 may further comprise a database (not shown) for storing the measurement and inspection results as well as other information such as images of the substrate scatter. The control computer 29 also controls the other operations of the other elements of the optical inspection system in accordance with the invention." at paragraph [0110]).

Lehman and Chhibber are combinable because they are in the same field of mask inspection specifically of inspection of flaws or impurities on a topographical surface.

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Lehman and Chhibber. All of the claimed elements were known in the prior art at the time of the invention and the skilled artisan could have combined the elements by known methods with no change in their respective functions, and the combination of the teachings of Lehman and Chhibber would have yielded predictable results to the skilled artisan.

The skilled artisan could have utilized storing a measurement data record with the corrected measurement result in a database system.

The motivation/suggestion for doing so would have been to "cause the control computer to control the elements of the optical inspection system connected to the control computer." at paragraph [0110], for example.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chhibber and Lehman to obtain the specified claimed elements of Claim 12.

Regarding Claim 13: With regards to "Currently Amended", claim 13, claim 13 equally resembles the claimed elements of Claim 12. Claim 13 as presented disclose a device (apparatus). Lehman teaches "The present invention relates to inspection of articles, and in particular, to inspection of articles related to manufacture of semiconductor devices. More specifically, the invention relates to the inspection of articles used in photolithography during manufacture of semiconductor devices." at paragraph [0002]. Claim 13 claims the operational

device steps that execute the method of Claim 12. Claim 13 is rejected for the same reasons, motivation and rationale as listed above at claim 12.

Regarding Claim 14: (Currently Amended) Chhibber teaches the correction data record further includes information for [[the]] correction of inhomogeneities of at least one of an associated CCD chip and an optical element (Refer to paragraph [0105], specifically, "The source light intensity sensors provide feedback to the system regarding light intensity of the broadband light source through control lines 31a and 31b.).

Regarding Claim 15: (Previously Presented) Lehman teaches detecting the at least one parameter that characterizes the mask ("Referring to Figure 1, the inventive method is implemented as follows. First, a reticle which is know to be good (i.e. is believed to be substantially free of defects, or as free of defects as is reasonably possible) is identified (step 1)." at paragraph [0030]).

Regarding Claim 16: (Previously Presented) Chhibber teaches the measurement results associated with the measured optical properties and the correction data record are combined in a data processing device (Refer to Figure 7, and paragraph [0114]).

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman (US 2003/0048939 A1) in combination with Chhibber et al. (US 20040207836 A1) and further in view of Sandstrom et al. (US 6883158 B1).

Regarding Claim 8: (Currently Amended) Lehman and Chhibber in combination teaches all the claimed elements as rejected above. However, Lehman and Chhibber in combination does not specifically teach measuring the optical properties comprises measuring at least one of CD values and/or positional errors.

Sandstrom teaches measuring at least one of CD values and/or positional errors (Refer to Figure 3; "Here, the expected lateral position error is shown as a function of the thickness of the plate and the size, i.e. the distance between the two supported sides." at column 2, line 10).

Lehman, Chhibber and Sandstrom are combinable because they are in the same field of mask inspection where the inspection scans for defects, holes, etc. (See title and abstract of each invention).

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to measure the optical properties including at laser a CD value and/or positional errors.

The suggestion/motivation for doing so would have been "to reduce imperfections in lithography using photomasks." at column 1, lines 10-25, Sandstrom.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Lehman, Chhibber and Sandstrom to obtain the specified claimed elements of Claim 8.

Regarding Claim 10: (Previously Presented) Sandstrom teaches means for measuring CD dimensions and/or positional errors of one of a CoG mask and a phase shift mask (Refer to

Figure 3; "Here, the expected lateral position error is shown as a function of the thickness of the plate and the size, i.e. the distance between the two supported sides." at column 2, line 10).

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman (US 2003/0048939 A1) in combination with Chhibber et al. (US 20040207836 A1) and further in view of Inoue (US 6,656,648 B2).

Regarding Claim 11: (Original) Lehman and Chhibber, in combination, teaches all the claimed elements as rejected above.
Lehman and Chhibber, in combination, does not specifically teach the mask is designed for wavelengths of 365nm, 193nm or 157nm.

However, Inoue teaches wherein the mask is designed for wavelengths of 365nm, 193nm or 157nm ("In the experiment, the imaging is performed by using, for example, a mercury lamp whose wavelength is 365 nm as the light source and using a CCD line sensor imaged by the objective lens of NA 0.75." at column 5, line 29).

Lehman, Chhibber and Inoue are combinable because they are in the same field of mask inspection where the inspection scans for defects, holes, etc. (See title and abstract of each invention).

All the claimed elements were known in the prior art at the time of the invention. The skilled artisan could have combined all these claimed elements by known methods with no change in

their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Therefore, it would have been obvious to combine the teachings of Lehman and Chhibber further in view of a "mask designed for wavelengths of 365nm, 193nm or 157nm as taught by Inoue to obtain the invention as specified in Claim 11 to make the overall reticle inspection process more efficient and cost effective.

Combining the mercury lamp whose wavelength is 365 nm, as taught by Inoue would provide an analysis that may further prevent the errors of the optical correction device. The optical system with improved microscopic details will correspondingly yield improved results in semiconductor manufacturing system and mask inspection operation.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman (US 2003/0048939 A1) in combination with Chhibber et al. (US 20040207836 A1) and further in view of Sandstrom et al. (US 6883158 B1).

Regarding Claim 17: (New-As best understood by the Examiner) Lehman teaches a method for determining imaging errors of an optical system in a production of a mask for semiconductor component fabrication ("...a method of reticle inspection which is convenient and easy to use, and which further can be distributed or disseminated easily, so as to be shared by various participants in the process of manufacture of semiconductor devices, and wherein the results of the inspections can be correlated." at paragraph [0019, and paragraph [0024]) the method comprising:

automatically selecting a stored correction data record from a correction database in a manner dependent on at least one parameter that characterizes the mask (Refer to Figure 2, numeral 240 and 250, alternatively, refer to Figure 1, numerals (3) and (4)),

correcting the measurement result by removing the first and the second errors from the measurement result by combining the measurement results with the correction data record (Refer to paragraph [0036], specifically, "Accordingly, it also is within the contemplation of the invention to store images other than the image of a master reticle, in a form in which the stored image may be used for subsequent comparison or analysis." Additionally, refer to Figure 1, numeral 7; "Accordingly, the pixels of the inspected and master images need to be aligned. Such an alignment can be done using the conventional technique used in the Aris-I (TM) for aligning pixels of the inspected image with pixels of the database. It should be appreciated that in addition to storing the reference image, the DVD or other storage medium can also include information (such as the location of alignment targets, bar codes and so on) that make alignment and other pre-inspection calibration easier than in the Die to Die method, which does not have such information available. That information also could be stored elsewhere in the system.") and

Sandstrom teaches exposing a mask by projecting light from an illuminator, the projected light comprising a first error (Refer to Figure 11, numeral S2; further at column 18, line 52);

measuring a measurement result of the projected light exposed through the mask using a detector system, the detector system adding a second error to the measurement result (Refer to Figure 11, numerals S3 and S4; further at column 18, lines 46+);

Chhibber teaches the correction data record including information related to the first and the second errors; (Refer to Figure 7, numeral 101; "In step 101, image corrections are applied. These corrections include but are not limited to detector fixed pattern noise correction, illumination light level normalization, detector dark level corrections and flat field correction.")

storing a measurement data record with the corrected measurement result in a database system ("The control computer 29 may further comprise a database (not shown) for storing the measurement and inspection results as well as other information such as images of the substrate scatter. The control computer 29 also controls the other operations of the other elements of the optical inspection system in accordance with the invention." at paragraph [0110]).

Lehman, Sandstrom and Chhibber are combinable because they are in the same field of mask inspection specifically of inspection of flaws or impurities on a topographical surface.

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Lehman, Sandstrom and Chhibber. All of the claimed elements were known in the prior art at the time of the invention and the skilled artisan could have combined the elements by known methods with no change in their respective functions, and the combination of the teachings of Lehman, Sandstrom and Chhibber would have yielded predictable results to the skilled artisan.

The skilled artisan could have utilized storing a measurement data record with the corrected measurement result in a database system.

The motivation/suggestion for doing so would have been to "cause the control computer to control the elements of the optical inspection system connected to the control computer." at paragraph [0110], Chhibber, for example.

Another suggestion/motivation for combining the teachings of Lehman, Chhibber and Sandstrom would have been "to reduce imperfections in lithography using photomasks." at column 1, lines 10-25, Sandstrom.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chhibber and Lehman to obtain the specified claimed elements of Claim 17.

Response to Arguments

11. Applicant's arguments with respect to claim 1 and the U.S. C 103 (a) rejections detailed at pages 8 and 9 of 12 have been considered but are moot in view of the new ground(s) of rejection. See the newly rejected claims above.

12. Applicant's arguments with respect to claims 2-8, 14-16, 9, 10, 11, 12, 13 and 17 have been considered but are moot in view of the new ground(s) of rejection. See the newly rejected claims above.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mia M. Thomas whose telephone number is (571)270-1583. The examiner can normally be reached on Monday-Thursday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on 571-272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mia M Thomas/
Examiner, Art Unit 2624

/Vikkram Bali/

Supervisory Patent Examiner, Art Unit 2624